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# Short Flow-Time Expansion of the LEFT basis: Background Field Method and Chiral Symmetry

*Tuesday 1 October 2024 17:00 (20 minutes)*

In this talk, I will present the Short Flow-Time expansion (SFTE) of operators present in the Low Energy Effective Field Theory (LEFT) up to dimension six, in the HV scheme. To be able to perform an off-shell calculation and avoid mixing with gauge-variant operators, we make use of the Background Field Method applied to the Gradient Flow. Moreover, we restore chiral symmetry by introducing appropriate counterterms. This work paves the way toward systematic higher-order SFTEs of LEFT operators, a key aspect to connect lattice simulations to continuum studies, which is a necessary ingredient e.g. for a robust determination of new-physics contributions to the neutron electric dipole moment.

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